

CLAIMS

1. An antimicrobial organic polymer material comprising an organic polymer material having a polymer side chain
5 containing a unit derived from an N-alkyl-N-vinylalkylamide on a backbone of a polymer substrate, wherein triiodide ion is carried on said organic polymer material.
2. The antimicrobial organic polymer material of Claim 1
10 wherein the polymer side chain containing a unit derived from an N-alkyl-N-vinylalkylamide has been introduced onto a backbone of a polymer substrate by radiation-induced graft polymerization.
3. The antimicrobial organic polymer material of Claim 1
15 or 2 wherein the unit derived from an N-alkyl-N-vinylalkylamide is derived from one or more polymerizable monomers selected from N-vinylpyrrolidone, 1-vinyl-2-piperidone, N-vinyl-N-methylacetamide, N-vinyl-N-ethylacetamide, N-vinyl-N-methyl propylamide, N-vinyl-N-ethyl propylamide and derivatives thereof.
- 20 4. The antimicrobial organic polymer material of any one of Claims 1 to 3 wherein the polymer substrate is composed of a polyolefin-based organic polymer.
5. The antimicrobial organic polymer material of any one
25 of Claims 1 to 4 in the form selected from a fiber, a woven/nonwoven fabric which is a fiber assembly and processed products thereof, fiber chips, beads, nets, films, plate members and bulk members.
6. An antimicrobial filter comprising the antimicrobial

organic polymer material of any one of Claims 1 to 5.

7. A process for preparing an antimicrobial organic polymer material, comprising introducing a polymer side chain containing a unit derived from an N-alkyl-N-

5 vinylalkylamide onto a backbone of an organic polymer substrate and loading triiodide ion on the resulting polymer material.

8. The process of Claim 7 wherein the polymer side chain containing a unit derived from an N-alkyl-N-vinylalkylamide
10 is formed by graft-polymerizing a polymerizable monomer containing an N-alkyl-N-vinylalkylamide onto a backbone of a polymer substrate via radiation-induced graft polymerization.